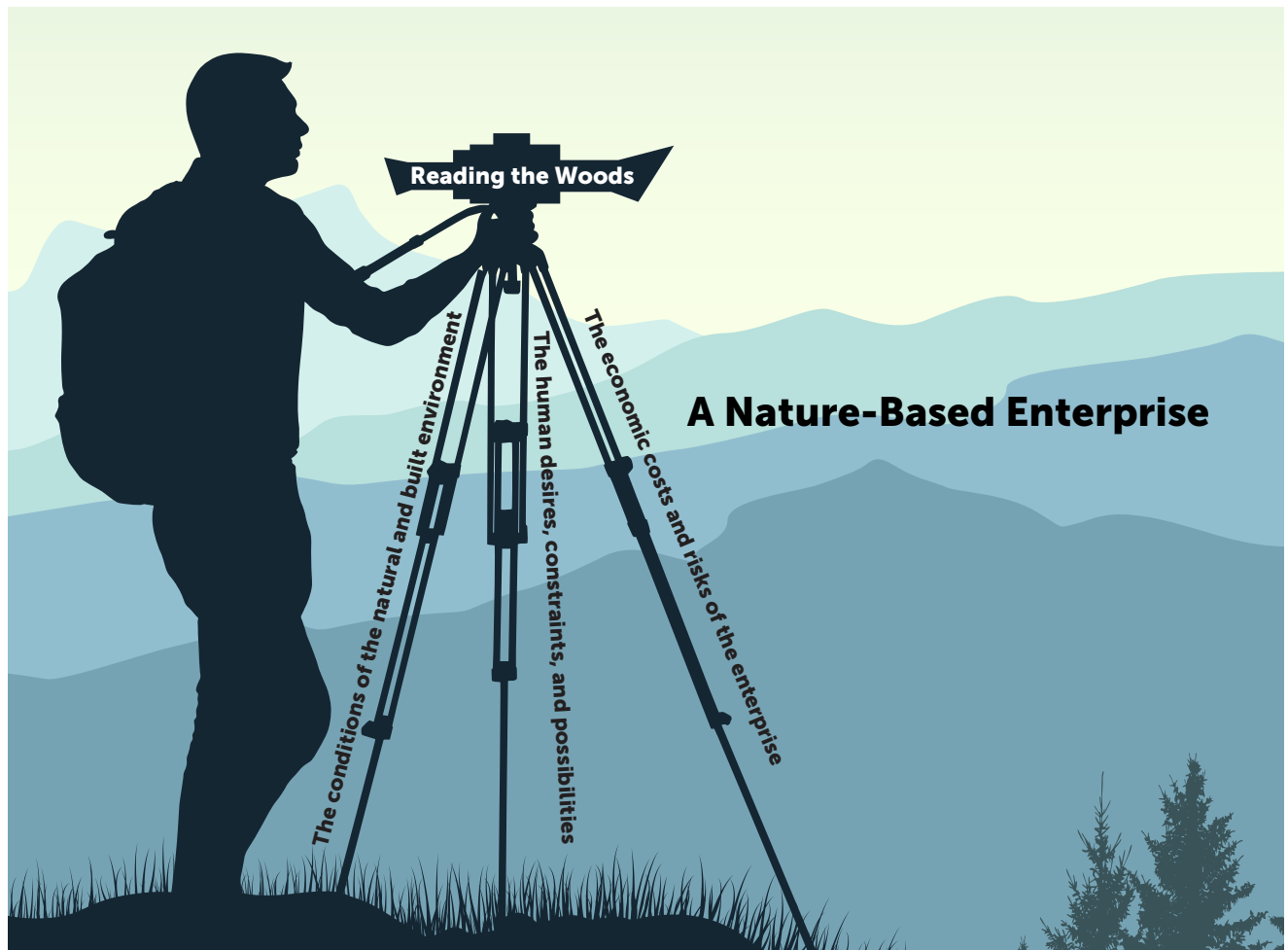


Reading the Woods Orientation Guide



This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number ENE21-168.

This document is a step-by-step orientation guide to the Reading the Woods toolbox. By following this guide, you'll be able to make full use of the Reading the Woods process and tools our team developed. The orientation guide is made up of five working sections.

1. Schedule and Conduct an Initial Assessment with the Woodland Steward(s)
2. Conduct a Whole Woods Assessment with the Woodland Steward(s)
3. Complete a Whole Woods Stewardship Analysis for Sustainable, Nature-Based Enterprises
4. Generate a Whole Woods Enterprise Plan
5. Conduct a Post-Assessment with the Woodland Steward

The five steps lead technical service providers through a series of assessments to gather information about the woodland steward(s), the forest, and the economic viability of an enterprise. The assessments generate both actual and forecasted evidence to analyze and calculate projected enterprise outcomes. The nature-based enterprise resources available in the online toolbox are referenced in each section to support technical service providers in completing the assessments, making calculations, and enterprise planning.

In addition to the step-by-step instructions for assessment, this orientation guide contains a helpful flow chart to show which step is to be taken when, and a narrative preface that describes the method & approach of Reading the Woods, and explains the infographic on this guide's cover. Reading the Woods is designed to be customizable to meet the different needs of different technical service providers and woodland stewards. So even though the sections have a numerical order, you are welcome to use the tool in the order that best fits your relationship with the woodland steward.

Acknowledgements

Future Generations University Appalachian Program would like to acknowledge the decades of published materials that precede the publication of "Reading the Woods." We heavily borrowed from the work of Jonathan S. Kays and Joy Drohan's *Forest Landowner's Guide to Evaluating and Choosing a Natural Resource-Based Enterprise*; The Yew Mountain Center's *West Virginia Forest Farming Initiative Site Visit Intake Questionnaire*; Rural Action and United Plant Saver's *Forest Farmers Handbook: A Beginner's Guide to Growing and Marketing At-Risk Forest Herbs*; The Center for Agroforestry at the University of Missouri's *Training Manual for Applied Agroforestry Practices*; the USDA Forest Service's *Income Opportunities in Special Forest Products: Self-Help Suggestions for Rural Entrepreneurs*; and Northeast SARE's *Reading the Farm: Training Agricultural Professionals in Whole Farm Analysis for Sustainable Agriculture, A Planning and Facilitation Guide*.

We would like to express our deepest appreciation and gratitude to the Reading the Woods Advisory Committee and key informants who contributed personal experiences, published works, network contacts, resources, and expertise on forest farming in Appalachia.

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How to Read the Woods

For Technical Service Providers

Schedule and conduct an initial assessment with the woodland steward

- Introduce Reading the Woods
- Begin to “shift the gaze” towards a holistic view of the forest
- Complete the Woodland Steward Self-Assessment



Conduct a Whole Woods Assessment with the woodland steward

- Obtain a forest inventory
- Collect questions

- Q Whole Woods Enterprise Matrix
- Q Consult local specialists
- Q Review the Woodland Steward’s Self-Assessment
- Q Refer to the Library & Archive for any remaining questions



Complete the Whole Woods Stewardship Analysis for Sustainable, Nature-based Enterprises

- Evaluate family needs and preferences
- Assess market potential
- Evaluate enterprise production feasibility
- Determine financial viability
- Assess long-term sustainability



Generate a Whole Woods Enterprise Plan

- Q Use enterprise calculators to project costs
- Q Use the Enterprise Budget Template to create an enterprise budget
- Q Complete the Yearly Tasks Plan Worksheet

Q Tools and resources



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Conduct a Post-Assessment with the woodland steward

- Review the Whole Woods Enterprise Plan, make amendments
- Determine whether further mentoring is needed
- Consider additional nature-based enterprises ...

REPEAT ASSESSMENT TO CONSIDER ADDITIONAL NATURE-BASED ENTERPRISES

Why “Reading the Woods”?

a Brief Description of our Method for Technical Service Providers

The Appalachian mountains are beautiful, and they’re home to diverse, healthy, fecund forests. In fact, on many small farms, the forest might have more acreage than the cropland or pastureland. Among consumers, interest is rising in forest-grown products. Accordingly, there are many new entrepreneurs beginning to look for ways to make a business, or even several enterprises, in the forest. Because various businesses like making maple syrup, growing goldenseal, leasing hunting rights, or selling carbon sequestration credits all require the naturally-grown forest, we refer to all these different businesses as “nature-based enterprises.” Sometimes these folks own their forest, sometimes they’ll lease someone else’s land for a specific purpose, or sometimes they start a business based out of a family member’s woodlot. Accordingly, we use the term “woodland stewards” to refer to these entrepreneurs—a term we borrowed from WVU Forestry Specialist David McGill.

But starting a nature-based enterprises can be difficult and confusing. Terms like “agroforestry,” “non-timber forest products,” and “forest farming” can be difficult to understand, because they often refer to a plethora of different, unrelated, production practices and business models. Accordingly, woodland stewards turn to land-grant Extension agents, NRCS agents, consulting foresters, and similar professionals for advice—a group we refer to collectively as “technical service providers.” Technical service providers have knowledge bases, skillsets, and often funding opportunities that can be of great help to these woodland stewards. But even the most knowledgeable technical service providers rarely get the chance to take a step back and look at the big picture. Often, that big-picture perspective is precisely what woodland stewards need before they know which technical service provider to call for the which type of assistance.

What’s needed is a clear framework, a method, that allows one to see the whole landscape, and which can be returned to for perspective when one gets lost in the details of a specific project. Reading the Woods is a method that can serve this function, training the woodland steward and the technical service provider to look at the nature-based enterprise landscape wholistically. Before allowing our gaze to take in the whole horizon, we need to ensure that our lens is placed upon a well-grounded tripod. As you can see in the image on the cover of this guide, the three legs of any nature-based enterprise are the environmental conditions of the farm and forest land, the economic conditions inherent in the enterprise itself and its market, and the social conditions of the farmer and their community.

The Reading the Woods project team generally advises TSPs to begin with the social, human, conditions of a nature-based enterprise. The most important aspect of the social conditions of a nature-based enterprise is the one most likely to be overlooked, because of its seeming obviousness: discovering the woodland steward’s definition of “success.” Does the enterprise need to cover property taxes? Is the enterprise so interesting or fulfilling to the woodland steward that breaking even is sufficient? Is this a family tradition, something that needs passed on to the next generation at nearly any cost?

Perhaps the woodland steward is enterprise-agnostic—whatever is most lucrative, or least time-consuming, will get preferred. Without a robust definition of success, a vision of the good woodland, that motivates the collaboration between the service provider(s) and the woodland steward, it is difficult to measure whether advice is helpful, and difficult to sustain progress.

Once the woodland steward's vision of success is clear to the TSP(s), the remaining parts of the social conditions fall into place easily. For example, labor time—any given farm family has only so many human hours, and has preferences about how to spend them. Market conditions are important, too: an enterprise that relies on direct-to-consumer sales is a great idea for a farmer who lives near a metro area, or near a flourishing farmers' market, but perhaps not for someone who's an hour from an interstate. These social conditions aren't in the wheelhouse of any particular technical service provider, but can naturally come up in conversation, as long as the service provider has enough time to spend consulting the woodland steward.

The second leg of the tripod—environmental conditions—are usually fairly well-understood by the appropriate technical service providers. Government and private agencies recruit, hire, and sometimes train technical service providers to analyze the health and composition of tree stands, the condition of the soils, the presence of waterways, the aspect and elevation of hillsides, and many more geological and ecological conditions. The presence and density of maple trees is a crucial determinant of whether a maple syrup enterprise is viable, and the amount of daylight hitting the forest floor can either facilitate or inhibit a forest-farming enterprise. Answering these types of questions requires some background understanding of basic agricultural and/or forestry science, and technical service providers are usually approached by woodland stewards precisely for this expertise. Reading the Woods encourages service providers to also attend to the built aspects of the environment. Whether access roads, electricity, or running water are available are important considerations in planning nature-based enterprises.

Still, not all natural conditions are as well-known by all service providers. Foresters who can do a timber cruise in their sleep might not know how to look to the understory for enterprise possibilities there, and experts on maple syrup might not know the first thing about silvopasture. For this reason, Reading the Woods has had great success with combined woodlot assessment – asking foresters and various experts in diverse nontimber forest products to walk through the woods together, jointly assessing the possibilities for the woodland steward and simultaneously cross-training each other. Because a woodland steward often doesn't know what they don't know—while a technical service provider usually knows what type of scientific or practical expertise they have and don't have—it may often take the initiative of a far-seeing technical service provider to make sure the right experts are providing the right perspectives.

Economic conditions are sometimes well-known by technical service providers, but, generally, they are less well-known than the environmental conditions. This is not entirely an oversight in service provider training; markets in various non-timber forest products are less understood than other markets and can often be highly variable. Creating value-added products instead of marketing raw commodities makes a difference in the economic viability of the nontimber forest product. And, of course, there are almost innumerable

entrepreneurial innovations which might not have clearly understood economic impacts. Part of creating new businesses and new models is that there are unknown markets.

However, there are business coaches and nonprofit organizations who can serve as service providers in this area, either as an assistant to a technical service provider or directly interacting with the woodland steward. In addition, Reading the Woods offers an important rule of thumb for evaluating the economic aspects of any nature-based enterprise: the first priority is to ensure that the woodland steward does not suffer economic costs needlessly. Although we've not yet performed robust evidence-gathering, like surveying, anecdotally, it seems like risk mitigation is more important to small Appalachian landowners than maximum profitability. This seems to be because nature-based enterprises are way for families to stay on their land and continue traditions. If wealth is the primary goal, nature-based enterprises might not be the correct means.

Reading the Woods uses the metaphor of the tripod because each of these conditions is equally important; all three are needed to help it stand. But it's also apt because it illustrates how adjusting one leg requires adjusting the others to maintain balance. If a woodland steward has a fecund woodlot with near-infinite possibilities, but has very little time to devote to new enterprises, it makes sense to focus on those enterprises that are least labor-intensive or those which are most lucrative—maybe leasing the hunting rights. On the other hand, it doesn't matter how many maple trees are on a woodlot, or how booming the market for syrup, if the woodland steward is uninterested in making syrup. Just as it is impossible to be an expert in each of the scientific disciplines that can shape a woodlot evaluation, it isn't possible to expect service providers to be experts in all three sets of conditions. But it is possible to keep each leg of the tripod in mind, and to make sure that each gets fair emphasis in discussions with the woodland steward. It's also possible for service providers to increase their professional networks, to ensure they know who to reach out to when they need a different expertise.

To best make use of this method, you'll need some tools. Some technical service providers are mandated to use the tools of their employer or professional organization, but for those who need them, the Reading the Woods project team has developed a robust toolkit that has emphasizes all three legs of the tripod. The remainder of this orientation guide is dedicated to providing the basic tools for those who need them. And don't hesitate to reach out to Future Generations University; we have plenty more!

Step 1: Schedule and Conduct an Initial Assessment with the Woodland Steward(s)

The initial conversation between a technical service provider and the woodland steward is a critical first step. This is an opportunity to introduce Reading the Woods. Explain to the woodland steward(s) the objective of Reading the Woods, what information you'll be gathering in the assessments, how you will be using this information, and your estimated timeline.

During this initial step, ask the woodland steward to complete the self-assessment. The Woodland Steward Self-Assessment facilitates a connecting of the dots between the woodland stewards' capacity to expand or diversify a nature-based enterprise, their personal goals and visions, the forest and its production capacity, and the current market for timber and non-timber products and services. This can be completed with you or on their own by using the online Google Form or a printed form. Keep a record for yourself to be able to reference later. The information in this assessment will be used in the Whole Woods Stewardship Analysis for Sustainable, Nature-Based Enterprises.

Resources

Find the [Woodland Steward Self-Assessment](#) in the [Assessment Workbook](#). Options to complete the Woodland Steward Self-Assessment are as follows:

- A. The assessment can be sent to a woodland steward via email beforehand.
 - a. The woodland steward can complete and submit the assessment on the Google Forms application. This requires an internet connection.

OR

- b. The woodland steward can download and print the Google Form to complete by hand and submit the document to the technical service provider.

OR

- B. The technical service provider can complete the assessment with the woodland steward.
 - a. The technical service provider can complete and submit the assessment on behalf of the woodland steward on the Google Form application. This requires an internet connection.

OR

- b. If the meeting location between the technical service provider and the woodland steward does not have an internet connection, the technical service provider can download and print the assessment to complete by hand. Upon receipt of the completed assessment, the technical service provider will need to complete and submit the assessment in the Google Form on behalf of the woodland steward.

Step 2: Conduct a Whole Woods Assessment with the Woodland Steward(s)

The Reading the Woods Whole Woods Assessment is an assessment conducted by you and the woodland steward(s) with support from local specialists. The Whole Woods Assessment is a forest inventory that goes beyond an average timber cruise defined by the United States Forest Service.¹ The assessment evaluates the root layer, vine layer, forest floor, shrub layer, under story, canopy, and emergent layer of a forest. The forest inventory presents the woodland steward(s) with a comprehensive understanding of their forest. This step establishes a basis of information for you and the woodland steward(s) to begin “sieving out” potential income opportunities from all layers of the forest.

Resources

The Whole Woods Inventory Assessment worksheet is available to guide you through a detailed forest inventory. The worksheet includes:

- a checklist of items to bring with you
- a list of questions to ask
- important observations to make
- additional information to report

Find the [Whole Woods Inventory Assessment](#) in the Assessment Workbook.

Download and print additional resources from the [Library & Archive](#) to build a customizable Reading the Woods Field Journal to reference while in the field.

Reading the Woods is curating the Library & Archive and [The Directory](#) to assist you in finding the answers to your and the woodland steward’s questions during and after the whole woods assessment. The Library & Archive is full of materials and resources for information, intellectual development, and the enrichment of this community. You will find books, articles, podcasts, recorded radio programs, video tutorials, handbooks, photographs, field notes, and past meeting agendas and minutes. Access The Directory to contact local specialists with questions and to provide additional technical assistance to woodland steward(s).

[The Production Planning Matrix for Nature-Based Enterprises](#) is a resource designed to illustrate timber and non-timber forest products and services side-by-side to compare their unique characteristics and the opportunity to layer the enterprises under a single forest canopy.

¹“Cruising is the process of measuring forest stands to determine stand characteristics, such as average tree sizes, volume, and quality. The primary purpose of cruising is to obtain a volume estimation to appraise and prepare timber sales.”

<https://www.fs.usda.gov/forestmanagement/products/measurement/aboutus.shtml#:~:text=Cruising%20is%20the%20process%20of,appraise%20and%20prepare%20timber%20sales.>



Step 3: Complete a Whole Woods Stewardship Analysis for Sustainable, Nature-Based Enterprises

The Whole Woods Stewardship Analysis for Sustainable, Nature-Based Enterprises reviews the goals, visions, and capacities of the woodland steward(s) and the forest inventory. The analysis further evaluates the market, enterprise feasibility, financials, and the sustainability of a timber or non-timber product or service. Results from the evaluations will inform the woodland steward's decision-making process in identifying potential income opportunities supported by the forest.

Worksheets are available in the [Assessment Workbook](#) to facilitate each of the evaluations.



Step 4: Generate a Whole Woods Enterprise Plan

After completing the analysis and selecting timber or non-timber forest products and/or services to invest in, the Whole Woods Enterprise Plan is an opportunity to assess the viability of the selected enterprise(s) and plan for production. Complete the [Whole Woods Enterprise Plan](#) and give a copy to the woodland steward.

A Yearly Enterprise Tasks Plan worksheet is available for you and the woodland steward to create an annual production plan. The worksheet will outline the activity and the amount of labor required per enterprise to be accounted for in the enterprise budget as a labor expense.

A forest farming calculator and a whole wood enterprise budget allows for the woodland steward to project annual costs, revenue, net income, and return on investment per enterprise.

Step 5: Conduct a Post-Assessment with the Woodland Steward

Schedule a follow up visit with the woodland steward one year after developing the enterprise plan.

Find the Woodland Steward Post Assessment in the [Assessment Workbook](#). Options to complete the Woodland Steward Post-Assessment are as follows:

- A. The assessment can be sent to a woodland steward via email beforehand.
 - a. The woodland steward can complete and submit the assessment on the Google Forms application. This requires an internet connection.

OR

- b. The woodland steward can download and print the Google Form to complete by hand and submit the document to the technical service provider.

OR

- B. The technical service provider can complete the assessment with the woodland steward.
 - a. The technical service provider can complete and submit the assessment on behalf of the woodland steward on the Google Form application. This requires an internet connection.

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- b. If the meeting location between the technical service provider and the woodland steward does not have an internet connection, the technical service provider can download and print the assessment to complete by hand. Upon receipt of the completed assessment, the technical service provider will need to complete and submit the assessment in the Google Form on behalf of the woodland steward.